



General

Guideline Title

Best evidence statement (BEST). Safe use of iodine-based skin preparation products in the perioperative area among patients with known or stated food allergy to shellfish or fish.

Bibliographic Source(s)

Cincinnati Children's Hospital Medical Center. Best evidence statement (BEST). Safe use of iodine-based skin preparation products in the perioperative area among patients with known or stated food allergy to shellfish or fish. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2012 Nov 28. 5 p.

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

The strength of the recommendation (strongly recommended, recommended, or no recommendation) and the quality of the evidence (1a–5b) are defined at the end of the "Major Recommendations" field.

It is recommended that all patients receive skin preparation products using iodine-based medical products prior to surgical procedures, as appropriate (Schabelman & Witting, 2010 [1b]; Beaty, Lieberman, & Slavin, 2008 [4a]; Coakley & Panicek, 1997 [5a]; Katelarius, 2009 [5a]; Lieberman, 2012 [5a]).

Note: Patients with known or stated food allergy to shellfish or fish may not have a higher risk of experiencing an allergic reaction to iodine-based products (Schabelman & Witting, 2010 [1b]; Beaty, Lieberman, & Slavin, 2008 [4a]; Huang, 2005 [4a]; Coakley & Panicek, 1997 [5a]; Katelarius, 2009 [5a]; Lieberman, 2012 [5a]).

Definitions:

Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain

4a or 4b Quality Level	Weak study design for domain
5a or 5b	General review, expert opinion, case report, consensus report, or guideline
5	Local Consensus

†a = good quality study; b = lesser quality study

Table of Language and Definitions for Recommendation Strength

Language for Strength	Definition
It is strongly recommended that... It is strongly recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is high support that benefits clearly outweigh risks and burdens (<i>or visa-versa for negative recommendations</i>).
It is recommended that... It is recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is moderate support that benefits are closely balanced with risks and burdens.
There is insufficient evidence and a lack of consensus to make a recommendation...	

Note: See the original guideline document for the dimensions used for judging the strength of the recommendation.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

- Conditions requiring skin preparation prior to a surgical procedure
- Food allergy to shellfish or fish

Guideline Category

Management

Prevention

Clinical Specialty

Allergy and Immunology

Family Practice

Pediatrics

Surgery

Intended Users

Advanced Practice Nurses

Nurses

Physicians

Guideline Objective(s)

To evaluate, among patients with a known or stated food allergy to shellfish or fish, if using iodine-based products prior to a surgical procedure increases the risk for experiencing an allergic reaction

Target Population

Patients who require skin preparation prior to a surgical procedure and have a known or stated food allergy to shellfish or fish

Interventions and Practices Considered

Use of iodine-based skin preparation products prior to surgical procedures

Major Outcomes Considered

Risk for experiencing an allergic reaction

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Search Strategy

- Databases: MEDLINE, CINAHL, Cochrane Database of Systematic Reviews, Google Scholar
- Search Terms: Iodine sensitivity/allergy, seafood sensitivity/allergy, fish sensitivity/allergy, hypersensitivity, povidone-iodine, betadine, immunology
- Limits and Filters: None
- Search Dates: Default date parameters were used for each database (date parameters not limited).
- Date Last Search Done: June 25, 2012

Number of Source Documents

A total of five articles were found which addressed the clinical question, including one systematic review, two descriptive studies and three expert opinion articles.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Table of Evidence Levels

Quality Level	Definition
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5a or 5b	General review, expert opinion, case report, consensus report, or guideline
5	Local Consensus

†a = good quality study; b = lesser quality study

Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Table of Language and Definitions for Recommendation Strength

Language for Strength	Definition
It is strongly recommended that... It is strongly recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is high support that benefits clearly outweigh risks and burdens (<i>or visa-versa for negative recommendations</i>).
It is recommended that... It is recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is moderate support that benefits are closely balanced with risks and burdens.
There is insufficient evidence and a lack of consensus to make a recommendation...	

Language for Strength	Definition
Note: See the original guideline document for the dimensions used for judging the strength of the recommendation.	

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Peer Review

Description of Method of Guideline Validation

This Best Evidence Statement has been reviewed against quality criteria by two independent reviewers from the Cincinnati Children's Hospital Medical Center (CCHMC) Evidence Collaboration.

Evidence Supporting the Recommendations

References Supporting the Recommendations

Beaty AD, Lieberman PL, Slavin RG. Seafood allergy and radiocontrast media: are physicians propagating a myth. Am J Med. 2008 Feb;121(2):158.e1-4. [PubMed](#)

Coakley FV, Panicek DM. Iodine allergy: an oyster without a pearl. AJR Am J Roentgenol. 1997 Oct;169(4):951-2. [PubMed](#)

Huang SW. Seafood and iodine: an analysis of a medical myth. Allergy Asthma Proc. 2005 Nov-Dec;26(6):468-9. [PubMed](#)

Katelarius CH. 'Iodine allergy' label is misleading. Aust Prescr. 2009;32(5):125-8.

Lieberman P. Ask the expert: shellfish allergy and the use of Betadine. Milwaukee (WI): American Academy of Allergy, Asthma & Immunology; 2009. Various p.

Schabelman E, Witting M. The relationship of radiocontrast, iodine, and seafood allergies: a medical myth exposed. J Emerg Med. 2010 Nov;39(5):701-7. [PubMed](#)

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Clarifying misconceptions that patients with a known food allergy to shellfish or fish have a higher risk for allergic reaction when exposed to iodine based medical products as compared to patients with no known food allergy to shellfish or fish

- Increased use of iodine-based medical products prior to surgical procedures in patients with known or stated food allergy to shellfish or fish

Potential Harms

Not stated

Qualifying Statements

Qualifying Statements

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Audit Criteria/Indicators

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2012 Nov 28

Guideline Developer(s)

Cincinnati Children's Hospital Medical Center - Hospital/Medical Center

Source(s) of Funding

Cincinnati Children's Hospital Medical Center

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Conflict of interest declaration forms are filed with the Cincinnati Children's Hospital Medical Center Evidence-based Decision Making (CCHMC EBDM) group. No financial conflicts of interest were found.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the [Cincinnati Children's Hospital Medical Center](#) .

Print copies: For information regarding the full-text guideline, print copies, or evidence-based practice support services contact the Cincinnati Children's Hospital Medical Center Health James M. Anderson Center for Health Systems Excellence at EBDMInfo@cchmc.org.

Availability of Companion Documents

The following are available:

- Judging the strength of a recommendation. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2008 Jan. 1 p. Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .
- Grading a body of evidence to answer a clinical question. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 1 p. Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .
- Table of evidence levels. Cincinnati (OH): Cincinnati Children's Hospital Medical Center; 2008 Feb 29. 1 p. Available from the [Cincinnati Children's Hospital Medical Center Web site](#) .

Print copies: For information regarding the full-text guideline, print copies, or evidence-based practice support services contact the Cincinnati Children's Hospital Medical Center Health James M. Anderson Center for Health Systems Excellence at EBDMInfo@cchmc.org.

In addition, suggested process or outcome measures are available in the [original guideline document](#) .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI on January 24, 2013. This summary was updated by ECRI Institute on March 6, 2014 following the U.S. Food and Drug Administration advisory on Over-the-Counter Topical Antiseptic Products.

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